

November 19, 2012

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Progeny LMS, LLC
Demonstration of Compliance with Section 90.353(d) of the Commission's Rules
Written *Ex Parte* Letter Addressing WISPA Part 15 Joint Test Report
WT Docket No. 11-49

Dear Ms. Dortch:

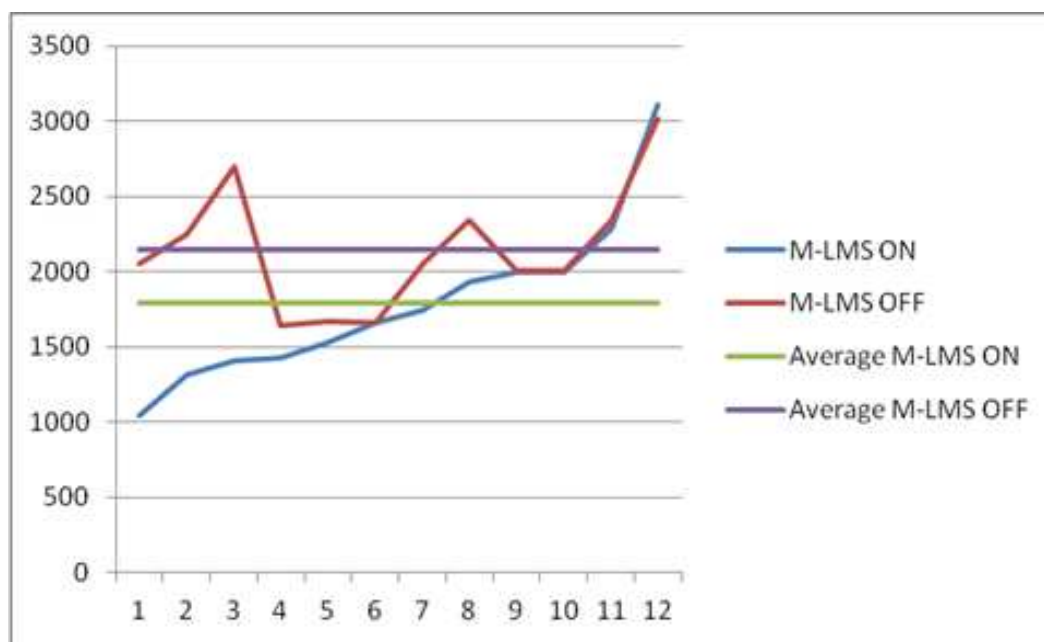
Progeny LMS, LLC ("Progeny") files this letter to correct the record with respect to overt misrepresentations made by the Wireless Internet Service Providers Association ("WISPA") regarding the results of joint tests that were conducted between Progeny and WISPA in support of Progeny's demonstration of compliance with Section 90.353(d) of the Commission's rules.¹ WISPA recently claimed in two consecutive *ex parte* filings that the joint test results showed a "40-50 percent reduction in throughput" for broadband wireless access ("BWA") networks when Progeny's M-LMS network operates in the same spectrum.²

¹ See Letter from Bruce A. Olcott, Counsel to Progeny LMS, LLC and Stephen E. Coran, Counsel for WISPA, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49, Progeny LMS, LLC & Wireless Internet Service Providers Association Part 15 Joint Test Report (Oct. 31, 2012) ("Joint Progeny/ WISPA Part 15 Test Report").

² Letter from Stephen E. Coran, Counsel for WISPA, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket Nos. 11-49, et al., Notice of Oral Ex Parte Presentation, at 1 (Nov. 16, 2012); Letter from Stephen E. Coran, Counsel for WISPA, et al., to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket Nos. 11-49, Ex Parte Notice, Attachment at unnumbered page 1 (Nov. 8, 2012) ("Part 15 Parties Ex Parte Filing") (arguing that "[w]hen testing on the same frequencies, Progeny's system caused a 40-50% loss in throughput, meaning 50% of a WISP's customers would lose service or the speed all of the WISP broadband customers would be cut in half").

WISPA's claim is directly contradicted by the joint test report that was filed with the Commission by WISPA and Progeny. The report documented an average throughput reduction of 24.36 percent when BWA networks operate in the same spectrum as Progeny's M-LMS network. (The report also documented that no throughput reduction results when BWA networks operate in the unlicensed spectrum just below Progeny's M-LMS spectrum.)

The results of each of the twelve "on/off" tests that were jointly conducted by Progeny and WISPA are plotted in the graph below, with the BWA throughput rates with Progeny's network off plotted in red and the throughput rates with Progeny's network turned on plotted in blue. As indicated by the horizontal purple and green lines in the graph, the BWA throughput rate was reduced an average of 16.31 percent across the twelve tests with Progeny's network on with no loss in BWA link stability or reduction in BWA transmission distance. The reduction in BWA throughput rate increased to 24.36 percent when only the co-frequency tests were considered (excluding the adjacent frequency tests).



Aggregate Results of Joint Progeny/WISPA Tests

As noted in the graph, in two of the co-frequency tests the BWA throughput reduction did reach 47.9 and 49 percent. Most of the co-frequency tests documented much lower levels of BWA throughput reduction, however, with two co-frequency tests documenting reductions of just 2.5 and 8.3 percent. In fact, when the two worst case outliers are excluded from the results, the average throughput reduction for even the co-frequency tests drops to 16.33 percent.

WISPA provides no explanation in either of its *ex parte* filings how the results of the joint tests could be construed to support its claim of a 40 to 50 percent reduction in throughput.

WISPA suggests in one of its filings that it is focusing only on the worst case results from the joint tests, claiming that “[r]eal world customers don’t experience ‘average’ data loss; they experience the severe impacts of maximum packet data and throughput loss.”³ WISPA’s assertion cannot withstand scrutiny. The vast majority of BWA customers will never experience the worst case results that were documented in the joint tests. Even in those limited cases where worst case results might arise, they can be easily remedied by BWA network operators through adjustments in frequencies or the configuration of the antennas in the same manner that BWA network operators deal with interference from other Part 15 devices (including other BWA networks) in the normal course of operations.

What the joint tests do show is that the impact of Progeny’s M-LMS network on BWA equipment is highly variable and can be affected significantly by the configuration of the BWA link, the choice and placement of antennas, and the proximity and direction toward Progeny’s M-LMS beacons. The test results also demonstrate that the impact of Progeny’s M-LMS network on BWA equipment is only a small fraction of the degradation that BWA networks already routinely experience from other users of the 902-928 MHz band.

As Progeny noted previously, the Cambium Canopy system that was employed in the joint tests is designed to transmit at up to 3.3 Mbps and/or at distances of up to 40 miles, while the Ubiquiti Networks system that was employed in the tests is capable of transmitting at 40 Mbps. In the relatively noisy suburban/urban test environment where the joint tests were conducted, however, the WISPA and Progeny engineers could not maintain reliable BWA links in excess 2 Mbps for the Canopy equipment and 3 Mbps for the Ubiquiti equipment at respective maximum distances of 2.3 miles and 1.5 miles with the Progeny network off.⁴

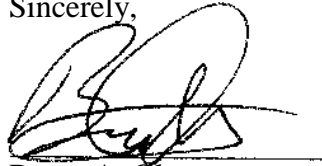
BWA network users are therefore already accustomed to the effects of the relatively noisy 902-928 MHz band, routinely experiencing dramatic reductions in throughput and link distance caused by existing unlicensed and secondary Part 15 devices. In contrast, Progeny’s M-LMS network produces relatively modest reductions in BWA data throughput with no reduction in BWA link distance or interruption in the BWA data session or link stability. Further, BWA network operators can avoid interference from Progeny’s M-LMS network using the same mitigation techniques that they already employ to address noise from other Part 15 devices. The Commission should therefore conclude that any impact to BWA networks that may result from

³ *Part 15 Parties Ex Parte Filing* at unnumbered page 2.

⁴ WISPA claims that its engineers could have established longer BWA links if given more time to identify potential test sites. *See id.* Progeny has been working with WISPA on the details of the joint Progeny/WISPA test plan since early June 2012 including extensive efforts to identify BWA link locations and configurations that could provide viable links in excess of 1 to 2 miles. Progeny therefore does not believe that the WISPA engineers could have established the significantly longer BWA link distances they desired if they had dragged out the preparations for the joint tests even further.

Progeny's primary licensed M-LMS network does not constitute unacceptable levels of interference.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce A. Olcott", written over a horizontal line.

Bruce A. Olcott
Counsel to Progeny LMS, LLC